



ARISS Newsletter

Mountain View Elementary

Volume 8: April 12, 2024



#TheBestView

#TheSkysTheLimit

Students and staff have been preparing all year for our possible direct contact with an astronaut on the ISS. After months of planning and preparation, we have an official date! The excitement is building now that we have the date and time and know who we will be talking to:

NASA Astronaut Jeanette Epps!

This is the experience of a lifetime and Mountain View is ready!



Did you know?

Expedition 1 arrived on the ISS on November 2, 2000. Since that day, astronauts from different countries around the world have continuously lived on the ISS! Usually there are 7 people at a time living on the ISS. Expedition 71, the crew we will hopefully make contact with this month, are there now. Expedition 71 began on April 5, 2024, and ends in September 2024. Read below to learn about Crew-8 who will make up part of the Expedition 71 team!



Meet NASA Astronaut Dr. Jeanette Epps

*Please read her bio on page 3, written by one of our 4th Grade STEM Squad members.
Here is a little about what she's up to on the ISS right now.*



Expedition 71 crew members will be doing biomedical research and space physics during their time on the ISS. Epps participated in eye checks giving doctors insights on microgravity's effect on the human body.



NASA astronauts aboard the ISS sported their eclipse glasses on March 26, 2024. They had the unique opportunity to see the eclipse from 250 miles above Earth! Epps was inside with Matthew Dominick photographing and videotaping the Moon's shadow on Earth, or umbra, beneath them. The ISS experienced a totality of about 90% during its flyover period.

NASA's SpaceX Crew-8

By: Cathy W.



NASA's SpaceX Crew-8 mission successfully launched to the International Space Station Sunday, March 3, 2024, at NASA's Kennedy Space Center in Florida. They docked with the ISS on Tuesday, March 5.

Crew-8 is an international crew of four consisting of NASA astronauts Matthew Dominick, Michael Barratt, and Jeanette Epps, and Roscosmos cosmonaut Alexander Grebenkin. Their mission is called Crew-8 because it is the 8th crew rotation mission of SpaceX's human space transportation system! They will be flying aboard the SpaceX Dragon spacecraft, Endeavour! Crew-8 will join the space station's Expedition 70 crew. There will be 11 people on the ISS for a few days until Crew-7 astronauts return to Earth. Matthew Dominick was selected as an astronaut in 2017 by NASA, and he will be the commander for Crew 8. Michael Barratt was a flight engineer for Expedition 19/20 back in 2009! He also flew on Discovery in 2011. On Expedition 70/71, he will serve as a mission specialist. Jeanette Epps was selected as an astronaut in 2009, and she was chosen to be a mission specialist on Crew 8. Alexander Grebenkin will also fly on Expedition 70/71 on the ISS.

Crew-8, while in space, will do some new scientific research to prepare for human exploration beyond Earth. Some of their experiments include using stem cells to create organoid models to help study degenerative diseases. According to NASA Administrator Bill Nelson, "Aboard the station, the crew will conduct more than 200 science experiments and technology demonstrations to help fuel this new era of space exploration and benefit humanity here on Earth."

Crew-8 was joined on the ISS by Soyuz MS-25 crew members, Russian cosmonaut Oleg Novitsky, NASA's Tracy Dyson and the first Belarusian in space, Marina Vasilyevskaya, who launched from Kazakhstan on March 23, 2024.



NASA's Expedition 71 Crew Members

By Luke D.



The NASA astronauts that are joining the ISS are Matthew Dominick, Michael Barratt, Jeanette Epps, and Tracy D. Dyson. Read below to learn more about each of them. These astronauts launched to the space station earlier this month. During their time on the ISS, these astronauts will be conducting experiments and learning about what happens to the human body when you are in space.



Matthew Dominick was born on December 7, 1981. He is now 42 years old and is from Wheat Ridge, CO, where he lives with his wife and two daughters. He is a U.S. Navy Commander who has accumulated more than 1,600 flight hours in his career. In June 2017, Dominick was selected as a member of Nasa Astronaut Group 22 and began a two-year training as an astronaut candidate. When Matthew was selected, he was at sea on the USS Ronald Reagan as a US Navy test pilot. He is the commander of the SpaceX Crew-8 mission to the ISS which just launched earlier this month.

Michael Barratt is 64 years old and was born on April 16, 1959. He is from Vancouver WA. He is married and is the father of five children. Barratt is a board-certified doctor specializing in Internal and Aerospace Medicine. He has always had a keen interest in human adaptation to space flight and started working with NASA in 1991 as a project physician. Over the years, he held various jobs at NASA, such as serving on the Health Maintenance Project and being a Manager of Hyperbaric and Respiratory Subsystems. He also traveled to Russia many times to work with his counterparts there. Then in July 2000 he was selected as a mission specialist by NASA and reported for training in August 2000. In 2009 he was Flight Engineer for Expedition 19/20. He has spent a total of 212 days in space across two spaceflights.



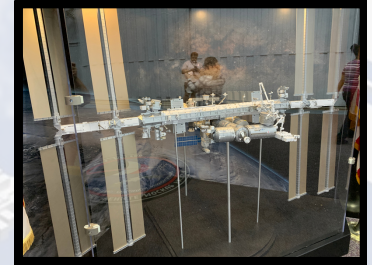
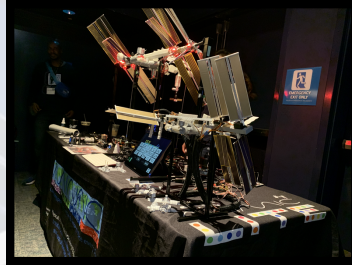
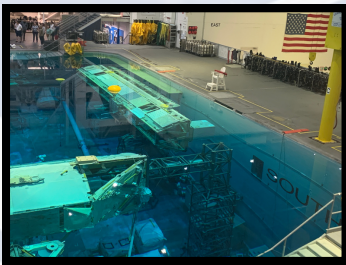
Jeanette Epps is an aerospace engineer from Syracuse NY. After college, she worked for Ford Motor Company and then for the Central Intelligence Agency (CIA) for seven years as a Technical Intelligence Officer. Epps was first selected as an astronaut candidate in 2009 and began training in 2011. Her Astronaut Candidate training included intensive instruction in International Space Station systems, spacewalk training, robotics, Russian Language training, and wilderness survival training. In 2017 and in 2020, she was assigned to a mission to the ISS, but both times, those plans changed and she did not go. In August 2023 Epps was assigned to be a mission specialist on SpaceX Crew-8 which just launched this month.

Tracy C. Dyson was born in Arcadia, CA and is now 54 years old. She is a chemist. In June of 1998 Dyson was hired by Nasa and began Nasa training in August. In 1999 Tracy was assigned to the astronaut office ISS operation branch as a Russian crusader, participating in testing and integration of Russian hardware and software products developed for the ISS. She was a mission specialist on Space Shuttle Endeavour flight STS-118 in August 2007 and part of the Expedition 23 and Expedition 24 crew on the International Space Station from April 2010 to September 2010. She has logged more than 188 days in space, including over 22 hours in three spacewalks.

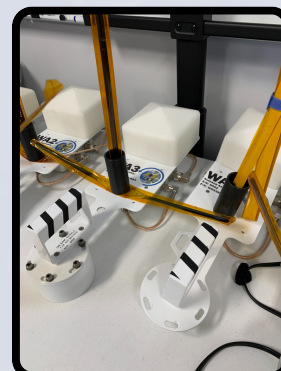
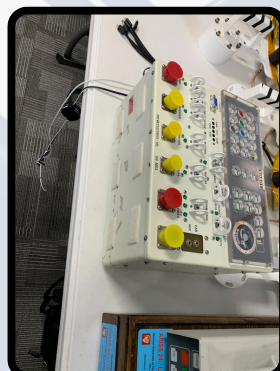


Dr. Z at NASA

In February, Dr. Zielinski had an opportunity to present how Mountain View Elementary school was incorporating ARISS into their STEM Lab and school curriculum through Grades K-5 and all specials. She presented during the Space Exploration for Educators Conference (SEEC) at the Space Center in Houston, Texas! In her session, was a real astronaut who had been to space, Astronaut John Shoffner! After presenting, Dr. Zielinski had an opportunity to visit Mission Control, the Neutral Buoyancy Lab, and the Space Vehicle Mock-Up Facility. She also learned new LEGO connections, Sphero connections to space coding, and had an opportunity to speak to NASA STEM.



February was a busy month for Dr. Zielinski! She was invited to the 40th Anniversary of ARISS, held at the Kennedy Space Center in Titusville, Florida. She was one in six teachers on the panel and presented about the importance of students learning by doing – even through failure – then facilitating through their successes. Dr. Zielinski also had an opportunity to meet with ARISS International delegates from around the world which included Germany, Italy, China, and Japan. While there, she was able to meet Paxi, the alien plush that flew in the ISS, as well as Astronauts Richard Garriott, William McArthur, Mike Fincke, Ken Cameron, and Nichole Stott.



Mission Patch Winners!

Congratulations to 4th graders Cole, Luke, and Leo--the designers of our MVES Mission Patch! Their winning design (pictured below) has been made into a real mission patch that will be gifted to every student and staff member at Mountain View to commemorate our ARISS contact!



Mission patches have been worn by NASA astronauts since 1965. The patches typically include the names of the crew members and images that represent their mission. Each patch is unique because the astronaut crew helps design their patch to symbolize what makes their expedition special.



Click on the link below to see NASA mission patches throughout the years.

[Gallery of Human Space Flight Mission Patches](#)

Launchapalooza 2024

Launchapalooza was held on Friday, March 29, 2024. This is the third time Mountain View students have participated in this event, and once again this year's competition was a great success!

During STEM classes this semester, all Mountain View students (grades K-5), worked on teams to build and test water rockets. Building on their previous knowledge from the past two years, this year's designers made rockets to launch at 75 psi (vs. 33 two years ago and 50 last year). Students also were given the additional challenge of attaching a parachute to their build this year. Just like the real-world challenges NASA scientists encounter, our students faced unforeseen challenges and had to work as a team to problem-solve their designs. One of the biggest problems was with their materials. The duct tape they used to attach the fins to the body of the rocket would not stick due to high humidity in the STEM lab. Students had to troubleshoot to come up with other ways/materials to use to make their design work.

Due to these issues, along with the unpredictable spring weather, students were not able to test launch their rockets outside. To ensure that the data was accurate, all rockets had to be tested in the same manner, so Dr. Z made the decision to run a variety of indoor tests to check balance, stability, mechanics, and surface area. Testing indoors gave students the unique opportunity to immediately rebuild their design and retest during the same class period. The top two rockets from each class then competed during Launchapalooza to determine a grade-level winner.







ARISS Question Contest Winners

Congratulations to the 20 students who were voted on to ask the astronaut their question!



I would like to know more about the interesting jobs they do in space. STEM allows me to draw and learn about snap circuits!



I like STEM because it's kind of like science. I get to build things and learn about space. I would love to be a Park Ranger when I grow up!



I want to be an astronaut when I grow up. Asking an astronaut a question will help prepare me to go to space!



I'm very nervous and excited to ask a real astronaut a question! My favorite thing about STEM is that it involves creativity and technology. My current career interests are being an artist, author, vet, or a coder!



I have always been naturally curious about why things are the way they are. I enjoy teaching and NEED to know WHY! Space is a never-ending topic to explore, and mixed in with technology, it's perfect!



I like STEM because of the variation in the projects I get to work on. I would like to be an astronaut, an engineer that works on space projects, or a MLB baseball player.



Being in STEM has introduced me to the world of space, science and exploration. This exposure to science has expanded my curiosity about the life of an astronaut.



I am so excited to speak with an astronaut as their job is not only cool but dangerous. I love how the galaxy is a mystery. I love stem as it challenges me and has cool projects.



I cannot wait to talk to the astronaut because it would help me understand what life is like in space beyond our basic needs. I am very interested in astronomy and all of the unique things we do in STEM related to it. I hope to be a scientist one day and continue to explore things that I am curious about.

ARISS Question Contest Winners



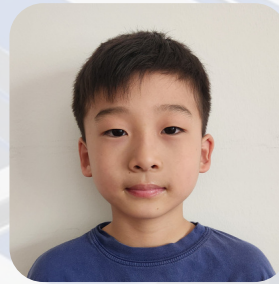
Since elementary school, I have been learning about how greenhouse gases and carbon footprints affect the earth. The reason I chose to ask this question is because from our view on earth, we do not have a clear picture of how it is impacting the earth.



I like solving problems and exploring like astronauts do. Through STEM, I am able to be creative, learn, and solve all at the same time.



I have always been very interested in learning more about space. Last summer, I went to an overnight Space camp in Alabama. I enjoyed the space simulators at the camp and that made me wonder how astronauts feel during the experience of leaving the Earth's gravitational field.



I went to Tellus Science museum with my parents, and I heard about old spaceships and other astronauts. I was curious how they can live in a spaceship without gravity and families.



As a competitive swimmer, exercise is a big part of my life. This led me to wonder about exercising in space. I have enjoyed learning about space since I was little.



I like learning about astronauts and space. I'm excited to hear directly from the astronauts their responses to our questions.



I've always had an interest on how astronauts bodies adapt after being in space for so long. I thought it would be so cool to hear from an actual astronaut what their experience was like in space and once they returned to earth. One of my favorite things about STEM is getting to build rockets and watching them be set off into the sky.



I like how with stem you are able to create things with coding, robots, or even mix things together to make something new. My interest in talking to an astronaut is extremely high as they are professionals and understand space as well as what it takes to survive in space.



I have an inquisitive mind and a natural curiosity about everything around me. I have been asking questions non-stop about space, the astronauts, and their lives on the space station, since Dr. Z introduced this to me in the beginning of the year.

Check out the great questions (in order of most votes) they will ask Astronaut Epps!

1. Lexi (K): Since things float, is there physical friction in space?
2. Aidan (1st): What is the worst emergency to have on the ISS and what do you do?
3. Atlas (2nd): Does zero gravity affect how your body processes food?
4. Dakota (3rd): If you broke a bone in space, would you heal the same as you would on Earth?
5. Cathy (4th): Do you feel anxious thinking about returning to your home since time creates change?
6. Dylan (5th): What is the most high-tech item on the ISS not well-known by others?
7. Grayson (4th): What's the biggest problem about the ISS?
8. Parker (3rd): On the ISS does the crew have full access or are there areas that are off limits?
9. Jordyn (3rd): Have you ever had to borrow parts from one item to fix different item on the ISS?
10. Jackson (5th): If you were given the option to live on the ISS permanently, what would your reaction be and would you accept?
11. Anju (6th): From your unique view in space, are there noticeable patterns that show how greenhouse gases might be impacting our planet?
12. Caden (2nd): Which is a better feeling: getting to space or living in space?
13. Zariya (6th): How did it feel when you left the Earth's gravitational pull?
14. Ian (2nd): Are you your own doctor if you get sick?
15. Harper M. (5th): When you sweat on the ISS from exercise, does the sweat fall off you like it does on Earth?
16. Meredith (4th): What kind of experiments do you choose to work on, and why?
17. Micah (1st): Do you use robots on the ISS and what do they do?
18. Harper L. (4th): Have you noticed an immediate change in your body after being in space?
19. Zachary (5th): Besides exercise, eat, play, and rest, are there any other things you need to do for your body while living in space?
20. Kendall (K): How do you get dressed in space without floating away?

Thank you to our Community Partners



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Amateur Radio on the International Space Station